UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

October 18, 2010

David C. Keith
Anchor QEA, LLC
614 Magnolia Avenue
Ocean Springs, MS 39564

Re: Draft Work Plan
Administrative Order on Consent for Time Critical Removal Action
CERCLA Docket No. 06-12-10
San Jacinto River Waste Pits Superfund Site near Pasadena, Harris County, Texas

Dear Mr. Keith:

Enclosed are the Environmental Protection Agency's (EPA) comments to Respondents' draft Work Plan. Per Paragraph 45(c) of the Administrative Order on Consent for Time Critical Removal Action, CERCLA Docket No. 06-12-10, EPA is requiring revisions to the draft Work Plan. Respondents shall submit a revised draft Work Plan within fourteen (14) days of receipt of EPA's notification of the required revisions. The revised draft Work Plan is due Monday, November 1, 2010.

If you have any questions concerning this matter, please contact me at (214) 665-2283.

Sincerely yours,

Valmichael Leos
Remedial Project Manager

Enclosure

COMMENTS TO DRAFT TCRA WORK PLAN

1. Pg 1, 1st bullet: remove "during the alternatives analysis"
2. Sec 1.1, 2nd paragraph:
   -2nd sentence: add "from two waste pits" after the phrase "into the waterway"
   -3rd sentence: remove "about the need for" and replace with "of"
3. Sec 1.2:
   -Reference to Appendix A should be EPA's Action Memo and EPA's Decision Document (Reference should not be to Respondents'' Technical Memo) and this section should reference the particular passage in EPA's documents (not Respondents)
   -1st bullet: replace "control erosion of waste materials" with "Stabilize waste pits to withstand forces sustained by the river"
   -1st bullet, 1st subsection: remove "sediments" and replace with "to be highly toxic"
   -1st bullet, 1st subsection: add to the last sentence "samples of the waste pits were recorded as high as 360,000 ng/kg for TCDD"
   -1st bullet, 2nd subsection: replace section with "The barrier design and construction must be structurally sufficient to withstand forces sustained by the river including any future erosion and be structurally sound for a number of years until a final remedy is designed and implemented" (taken word for word from EPA's Decision Document)
   -1st bullet: 3rd subsection: replace section "Technologies used to withstand forces sustained by the river must be structurally sufficient to withstand a storm event with a return period of 100 years until the nature and extent of contamination for the Site is determined and a final remedy is implemented.
   -4th bullet: remove 2nd sentence
   -4th bullet: add sentence "Because this action constitutes source control, these actions are consistent with any long term remediation strategies that may be developed for the site." (word for word from EPA's Action Memo)
4. Sec 1.3
   -Remove from 1st sentence "and the preferred alternative, which is the subject of this RAWP, was selected by US EPA in their decision document" and replace with "of potential options"
   -remove 2nd sentence. Replace with "Upon review of the TCRA Alternative Analysis, EPA selected a temporary granular cover designed to withstand a storm event with a return period of 100 years.
   -3rd sentence: remove "remedy" and replace with "removal"
   -add bullet placement of signs indicating DANGER and that this is the location of the a Superfund Site and give the contact information (sample sign is attached)
   -add bullet: design and implementation of Operation and Maintenance of temporary cover
   -paragraph after bullets and replace with a bullet stating "installation of an impervious geomembrane as underlayment for the temporary granular cover"

5. Section 2 Summary of Existing Conditions
   -1st paragraph, 2nd sentence: add "as well as an impoundment located south of I-10" to the end of the sentence
   -3rd paragraph, 3rd sentence: remove sentence and replace with "Physical changes at the Site in the 1970s until present, include regional subsidence of land in the area. This has resulted in submergence of the eastern impoundment and partial submergence of the western impoundment and exposure of the dioxin waste into the San Jacinto River.
   -3rd paragraph, 4th,5th, 6th, and 7th sentence: remove 4th, 5th, 6th, and 7th sentence and replace with "Based on permit reviews, dredging occurred in the vicinity of the impoundments."
6. Section 2.2
   -1st sentence: check with Linda Broach, TCEQ, (according to her, bed elevations range from 5-10 feet instead of 0-4 feet for the eastern impoundment as stated in the draft TCRA Work Plan)
   -2nd paragraph, 1st sentence: replace "surface sediments" with "source material"
   -2nd paragraph, 2nd sentence replace "sediment" with "source material"
   -3rd paragraph, 2nd sentence: add "Based on 6 samples," to the beginning of the sentence
7. Section 2.3
   -1st paragraph, 2nd sentence: replace "adjacent to" with "part of"
   -2nd paragraph, 1st sentence: replace "surface sediments" with "source material"
   -3rd paragraph, 1st sentence: replace "surface sediment" with "source material"
   -3rd paragraph, 2nd sentence: replace "surface sediments" with "source material"
   -3rd paragraph, 2nd sentence: add to the beginning of this sentence "From those 2 samples,"
8. Section 2.4
   -1st paragraph, 3rd sentence: remove "some areas of"
   -1st paragraph, 3rd sentence: "in this area"
9. Section 3
   -remove sentence 2
   -sentence 3: remove "Appendix A and"
10. Section 3.1
    -delete section 3.1
11. Section 3.2.1
    -1st bullet: Add the following sentence to the end of the 1st bullet section "Both the modeling and conclusions derived from the modeling need to be verified by EPA.
    -last bullet: remove last sentence "The larger scale regarding would provide an additional protective layer of the relatively clean material from the berms over the source material within the impoundments prior to placing the final protective cover."
12. Section 3.2.2
    -2nd bullet: add "if Respondents' acquire access" to the end

-3rd bullet: change to read "obtain access to the Site via water or land. If land access is acquired then an access road will be constructed."

13. Section 3.2.3
-1st bullet, 3rd sentence: replace "sediment" with "source material"
14. Section 3.3
-add sentence after 4: "Additional signage surrounding the waste pits will need to be placed that indicate the presence of a Superfund Site. (See attached sample sign.)"
15. Section 3.4
-remove sentence and replace with "Site preparation activities include clearing and grubbing and could potentially include the setup of the staging and laydown area, construction of an access road to the TCRA Site, and regarding of perimeter berms to facilitate cover material placement."
16. Section 3.4.1
-1st sentence: replace "will be required" with "is desired"
17. Section 3.4.2
-1st paragraph: remove last sentence and replace with "If access is unavailable by land, then the Site will be access for the TCRA by water.
18. Section 3.5.1
-1st sentence: remove "prevent the exposure and erosion of sediments within the TCRA Site" and replace with "address the imminent and substantial endangerment posed by the release and threatened release of dioxin waste sludge from the waste pits into the San Jacinto River."
-paragraph 2, sentence 2: replace "sediments" with "source material"
-paragraph 2, sentence 3: add to the end of the sentence "that is still to be reviewed and approved by EPA"
-paragraph 3, 1st sentence: remove "which is supported by EPA"
-paragraph 3, 4th sentence: remove "developed" and replace with "proposed subject to EPA approval"
-paragraph 3, 4th sentence: replace "sediment" with "source material"
-references App G which needs to be edited (and vetted by EPA) see general comment below
19. Section 3.5.2.1
-1st paragraph, 2nd sentence: replace "sediment" with "waste sludge" in 2 places in the sentence
-3rd paragraph: remove last sentence (2nd sentence in 3rd paragraph)
20. Section 3.5.2.2
-2nd paragraph, 1st sentence: remove "and long-term factors of safety"
-2nd paragraph, 3rd sentence: remove (last sentence in paragraph 2)
21. Section 3.5.2.3
-1st paragraph, 1st sentence: remove "sediment" and replace with "source material"

-1st paragraph, 2nd sentence: remove “sediment” and replace with “source material”
-2nd paragraph, 2nd sentence: remove “sediment” and replace with “source material”
-2nd paragraph, 3rd sentence: remove “sediment” and replace with “source material”in 2 places in the sentence
-4th paragraph, 2nd sentence: remove “sediments” and replace with “source material”

22. Section 3.7.1.2
-2nd paragraph, 2nd sentence: sentence should be removed and replaced with “Consultation with the Texas Commission on Environmental Quality (TCEQ) is necessary to confirm that the TCRA design meets the substantive requirements of Section 401 of the CWA”

23. Section 3.7.1.3
-1st paragraph, 2nd sentence: replace “sediment” with “source material”
-add bullet points of activities to be performed by Respondents that will minimize discharges of fill into the water
-2nd paragraph: the Site is in a wetlands and a plan will need to be established that addresses the requirements (to the extent practicable) of Section 404 and 404(b)(1)

24. Section 3.7.2
-2nd paragraph, last sentence: replace last sentence with “The actions described in this RAWP will temporarily limit public access but the public access is limited to prevent exposure to humans to the contents of the waste pits.”

25. Section 3.7.3
-1st paragraph, 2nd sentence: remove and replace with “The TCRA Site is within a marsh next to a highway overpass.”
-last paragraph: replace 1st sentence with “Pursuant to CERCLA 121(e) and US EPA policy, consultation with the U.S. Fish and Wildlife Service (USFWS) and NMFS is needed to determine if protected species and their habitat will be affected by the proposed site activities even though a permit is not required.”

26. Section 3.7.5
-1st paragraph, 1st sentence: hydrologic evaluation “subject to EPA approval”. “EPA will evaluate whether the temporary cover will significantly affect water levels.”

27. Section 3.7.6
-remove 1st sentence
-remove last sentence and replace with “Respondents will consult with the State Historic Preservation Officer regarding the No Effects determination presumed by Respondents”

28. Section 3.7.7
-remove 2nd sentence and replace with “Due to the TCRA site being bounded by water on three sides by water and adjacent to a highway overpass on the fourth side, noise from the construction activity is unlikely to constitute a public nuisance.”

29. Section 4.2.2
-last paragraph, 2nd sentence: replace “sediment” with “source material”

30. Section 5.1.3
    -title should be called “Contingency Waste Sludge Probing Observations”
    -1st sentence: replace “sediment” with “source material”
31. References
    -need to add EPA’s Action Memo
    -need to remove RI/FS Work Plan (has not been approved by EPA yet)
32. Appendix G
    -references approval of EFDC hydrodynamic model which has not been approved by EPA
    -final fate and transport has not been approved by EPA
33. Appendix I
    -EPA has not reviewed or approved of the studies referenced in this appendix

Overall Comments:
-remove reference to “remedial” and replace with “removal” (this includes the tables and appendices)
-references plan and surveys that EPA has not reviewed or approved (should state that those plans and surveys are subject to EPA review and approval)
-remove all references to “sediment” and replace with “source material” (including all the Appendices)

of the access corridor was required. It is unknown whether the results of this sampling will further delay obtaining access to this corridor.

The level of improvement necessary is a function of the equipment that the contractor will use. A temporary haul route will be constructed within the TXDOT ROW to connect the Site to local access roads. The design (width of the haul road, as well as the selection and thickness of roadway aggregates and stabilization geotextile) of the improvement will be the responsibility of the contractor. In addition, the contractor will be required to maintain the haul route throughout the duration of TCRA construction.

3.4.3 Clearing and Grubbing

Vegetation in the western cell needs to be cleared and grubbed to facilitate installation of the granular cover. Following mobilization, staging area preparation, and access road construction, the above-ground vegetation will be cut down and larger pieces shredded in a drum grinder or other suitable equipment. materials generated during this process will be shipped off-site to an approved disposal facility.

After the initial above-ground clearing has been completed, the organic layer and root mat will be grubbed onsite. This material will be spread evenly across the footprint of the western cell and serve as the base layer upon which the granular cover will be constructed.

3.5 Granular Cover Design

There are two primary components to the design of the granular cover: the hydrodynamic design (aggregate size and cover thickness to resist the design-level flow event) and the geotechnical component (bearing capacity, slope stability, and filter criteria).

3.5.1 Hydrodynamic Design of Granular Cover

The primary objective of the granular cover material is to prevent exposure and erosion of sediments within the TCRA Site. The cover material gradation has been designed using methods developed by the USEPA and the U.S. Army Corps of Engineers (USACE) and presented in *Armor Layer Design of Guidance for In-Situ Subaqueous Capping of Contaminated Sediments* (Maynord 1998).

4.4 Documentation

Documentation required for the project is described in detail in Appendix E. There are several categories of documentation that will be required:

- Pre-construction documentation
- Construction documentation
- Post-construction documentation

Pre-construction documentation includes contractor work plans, quality management plans, health and safety plans (HASPs), survey control plans, and construction schedule. These plans will be developed by the contractor and are subject to review and approval by the respondents and USEPA as described in the AOC (USEPA 2010a).

During construction, the contractor will prepare a daily quality control report. This report will also be summarized on a weekly basis. A weekly construction meeting will be held to discuss project progress and issues as they develop. Minutes from these meetings will be prepared and maintained in the project file. In addition, the respondents' on-site construction management team will maintain an independent daily record of project activities. These records will include any reports of environmental monitoring that was performed, as described in Appendix D.

Once construction has been completed, completion report will be prepared as required by the AOC and described in detail in Appendix E.

4.5 Health and Safety

Health and safety will be of primary importance for all Site workers. The contractor will be required to develop and abide by their own health and safety plan (CHASP). The requirements for the CHASP are presented in the specifications (Appendix A). The CHASP will be subject to review and approval by the resident engineer and USEPA.

In addition to the CHASP, the Respondents' construction management team and all Site visitors will be required to follow the approved health and safety plan (HASP) presented in Appendix F. At a minimum, all staff working on-site will be required to have a current

5 OPERATIONS, MONITORING, AND MAINTENANCE

The TCRA is the first in a potential series of actions that may be required at the Site. For planning purposes, USEPA has directed that operations, monitoring, and maintenance (OM&M) be assumed for up to 7 years for the TCRA. After that point, future actions associated with the Site RI/FS and within the TCRA footprint would be either under construction and/or completed. OM&M associated with future actions will thus ensue, and OM&M associated with the TCRA would be complete.

5.1 Monitoring Activities

The following monitoring activities will be performed to ensure the continued functioning of the TCRA:

- Periodic visual inspections of the TCRA components
- Bathymetric surveys to monitor the thickness of the granular cover
- Contingency sediment probing observations

5.1.1 Periodic Visual Inspections

The Respondents will make periodic visual inspection of the TCRA elements. Visual inspections will be scheduled during low water periods to facilitate the maximum view of the TCRA Site possible. The following project elements will be visually inspected:

- Condition of the security fence and signage
- Condition of the armored cap
- Visual confirmation that waste materials are not being actively eroded into the river

Visual inspections will be performed at least once eve[illegible] months for the first 2 years. A field report will be prepared documenting the visual inspection and will include representative photographs of TCRA Site conditions. Additional visual inspections will be performed as necessary following extreme weather events.

5.1.2 Bathymetric surveys for cover

A bathymetric survey will [illegible]performed annually for the first 2 years after construction to evaluate any changes in the top elevation of the TCRA granular cover. The survey will be

performed in the same vertical datum as the design documents. The survey will be performed at low tide with a level rod and real time kinetic (RTK) differential global positioning system (DGPS), or during mid- to high-tide times using a shallow draft boat.

Bottom soundings will be made on 25-foot trackline intervals over the entire footprint of the TCRA granular cover. Surveys will be performed in accordance with accuracy and quality assurance/quality control (QA/QC) standards established by USACE (USACE 2002).

An additional bathymetric survey will be performed as necessary following any storm event that exceeds the design-level event for which the TCRA was designed.

Each bathymetric survey will be compared with the prior survey. Where surveyed elevations are within 6 inches of one another, the results will be considered within the margin of survey accuracy and will not be cause for contingency actions unless visual observations indicate that the discrepancy was due to the loss of granular cover material.

Elevation changes of 6 inches or more between surveys will be cause for additional evaluation. If the most recent survey elevation is more than 6 inches higher than the prior survey, the elevations will be re-checked and the survey benchmarks will be verified. If the most recent survey elevation is substantially less than the prior survey, contingency sediment probing observations may be initiated as described in this section.

After the first two annual surveys, a survey will be performed at Year 5. If the lifetime of the TCRA extends beyond 7 years, surveys would be performed at Year 10, and every 10 years thereafter as necessary until the final remedy has been implemented for the Site.

5.1.3 Contingency Sediment Probing Observations

If review of bathymetric survey data is inconclusive regarding the thickness of cover, contingency sediment probing observations may be performed to evaluate the thickness of cover material present in the area of interest. These surveys may be diver assisted if necessary. A 1-inch diameter galvanized steel pipe probe will be hand-deployed by a diver or from a vessel capable of operating in shallow water. The probe will be used to penetrate

the cover material down to the geotextile layer and the thickness of cover determined based on this probing.

The contingency probing observations will be used to evaluate whether the required thickness of granular cover is present in the area of interest.

5.2 Maintenance Activities

The respondents will initiate an on-call agreement with a local contractor that can respond to the TCRA Site on short notice. This contractor will be available to provide emergency repairs in the event that TCRA elements are damaged.

In the event that damage to the granular cover has occurred, the cause of the damage will be evaluated through a visual inspection of the damaged area. After the cause has been evaluated, the cap will be repaired with appropriately sized granular cover.

If material has been scoured but a substantial flow event has not occurred, the damage will be visually evaluated to determine whether it was caused by anchor drag, vessel grounding, or some other type of impact force. In this case, the cover will be repaired with similar-sized material, and Site restrictions will be reviewed to determine if additional perimeter barriers or other measures should be implemented to protect the TCRA elements.

If the cover damage is not obviously related to impact forces and there has not been a significant flow event, the grain size of the granular cover may need to be re-evaluated for the scour repair. The hydrodynamic model will be recalibrated using flow data from the event that likely caused the damage and the grain size of the cover material that was scoured in order to determine an appropriate gradation for the repair material.

DANGER/PELIGRO

Unauthorized Personnel Keep Out

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For More Information Call:

1-800-533-3508 (toll-free)

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